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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,734	02/14/2000	FRANK PUTTKAMMER	990350	2153

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EXAMINER

CAPUTO, LISA M

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/485,734

Applicant(s)

PUTTKAMMER ET AL.

Examiner

Lisa M Caputo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 12.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Amendment

1. Receipt is acknowledged of the amendment filed 24 July 2002.

Oath/Declaration

2. The oath/declaration is objected to because the title in the declaration ("Constituting Security Elements with Optical Diffraction Effect, and Device for Controlling such Elements") does not match the title of the actual specification ("Structure of Security Elements Effective by Optical Diffraction and Apparatus for Examining such Elements"). Please clarify which is the proper title.

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

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(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Please insert proper headings into the specification.

4. The disclosure is objected to because of the following informalities:

Regarding page 5, line 15: Replace "The" with --To--.

Appropriate correction is required.

Claim Objections

5. Claims 1-3 are objected to because of the following informalities:

Regarding claim 1, line 5: Replace "and/o" with --and/or--.

Regarding claim 2, line 3: Replace "and/o" with --and/or--.

Regarding claims 1-3, the use of "and/or" is interpreted to be non-specific because it gives the option of having the "and/or" elements, or not. Please specify the actual elements of the claims.

Appropriate correction is required.

6. Claims 9-22 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 9-22 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards (U.S. Patent No. 5,388,862).

Edwards teaches a security article having all of the elements and means as recited in claims 1-8 of the instant application. Edwards discloses that according to the present invention there is provided a security article which comprises at least one elongate security element, the security element being visually detectable in transmitted light to display portions which transmit light and portions which are opaque, wherein the security element comprises a plurality of layers including a light-transmitting support layer and two or more series of opaque regions which are separated by at least one light transmitting layer, which may be the support layer, characterised in that the opaque regions are arranged such that at certain parts of the security element the said regions overlap to prevent light transmission and elsewhere along the length of the security element the opaque regions do not overlap or partially overlap such that light transmission through the security element can occur. By the term "opaque regions" it is to be understood that such regions in the security element transmit significantly less light when viewed with the naked eye in comparison to the transmissive regions of the security element between such opaque regions and in comparison with the regions of

the security paper, etc. adjacent to the security element. Preferably the security article is security paper and the security element is either wholly embedded within the paper, or is partially embedded within said paper with portions thereof being exposed at the surface of the paper at spaced intervals along the length of the security element at windows or apertures in the paper. Preferably there is also present between the series of opaque regions at least one and preferably two thin layers of metal, which layer or layers has a combined optical density of 0.1 to 1.2, preferably from 0.3 to 0.9. Such a thin layer of metal, if made of aluminum, which is preferred, serves to render the security element less visible when viewed in reflected light. In one embodiment in the paper the security element of this invention when viewed in reflected light has characteristics not significantly different from the prior art security element made from vacuum deposition of aluminum on to a polyester support, although, of course, the appearance of the security element of this invention is radically different when viewed with transmitted light. In a preferred embodiment of the invention security paper includes a security element formed from two parts, one part bearing on one side of a light-transmitting support layer opaque, spaced-apart regions of aluminum and on the other side of the support layer a thin film of aluminum, which part is adhered another part which comprises a light-transmitting support layer having on one side a thin film of aluminum, the two layers of thin aluminum having a combined optical density of 0.15 to 1.0, and on the other side of the support layer opaque spaced-apart regions of aluminum, said two parts being united with an adhesive layer positioned between the two thin layers of aluminum (see col 2, lines 7-63). Hence, regarding claim 1 Edwards

teaches a structure of optically effective diffraction security elements in a document wherein the security element is provided with target-oriented encoding of data that consists of a discontinuous metallization layer.

Further, Edwards discloses that the metallised regions 2A and 2B extend across the security element and may be in a bar pattern as shown in FIGS. 2 and 3 of the accompanying drawings; also, FIG. 4 indicates an alternative pattern that can be used in practice of the invention. In FIGS. 2,3 and 4 the top half of the security element is shown in plan view to indicate suitable patterns for the aluminum regions 2A, with the resist 3A lying over the aluminum (see Figures 2-4, col 5, lines 32-41). Figures 2-4 show the different geometric shapes (i.e. lines, meandering form) that the encoding resembles as recited in claims 2-5 and 8 of the instant application.

Regarding claims 6-7, Edwards discloses that with reference to FIG. 7, a web of colourless 12 .mu.m thick polyester 31A (e.g. EMBLET 1200) is vacuum coated with an opaque uniform layer of aluminum at an optical density of 2.0 to 2.5. The web is then partially demetallised to produce a bar pattern as described in Example 1. Conveniently, the bars are 1.0 mm wide and spaced 1.0 mm apart, as represented by regions 32 in FIG. 7. After demetallisation, the bars have a resist coating 33A on their upper surface. A partially transmitting layer of aluminum 34A of an optical density 0.6 is then deposited over the web on the selectively demetallised side in a further vacuum deposition operation, such that this second metal layer is present over the resist layers 33A and in between the opaque metal layers 32A; this partially transmitting layer is designated 34A (see Figure 7, col 8, lines 49-64). Hence, Edwards teaches that the distance between

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two zones of electrical conductivity is the shortest distance between electrodes and further that the distance is at least .1 mm.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 6,036,232 to Kaule et al. which discloses a data carrier with an optically variable element.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Lisa M. Caputo** whose telephone number is **(703) 308-8505**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone number for this Group is (703)308-7722, (703)308-7724, or (703)308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [lisa.caputo@uspto.gov].


All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



LMC

May 14, 2003



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